Year 9 End of Year Assessment Revision Topics

Date: W/C 12th May 2025



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Biology

There will be 1 Biology paper, which will be 40 minutes long

Topics included: Plants and Photosynthesis, Biological Systems and Processes

Plants and Photosynthesis:			
	Identify and label a root hair cell Describe how roots take up minerals, nutrients and water from the soil Describe photosynthesis in a word equation representing products and reactants Label the internal parts of a leaf Describe how leaves are adapted to carry out photosynthesis State where stomata are found and what they do Identify hazards and risks and suggest appropriate ways to reduce the risks Describe how to test a leaf for starch Describe the role of the xylem and phloem Describe how plants affects the atmospheric carbon dioxide levels Give examples of pollinators State what is meant by food security Describe why pollinators are important for food security		
Biologi	cal systems and processes:		
	Order the stages of organisational hierarchy e.g. cell, tissue etc Explain the functions of the skeleton Describe the function of antagonistic muscle pairings, giving named examples. Describe how to measure the strength of different muscles Describe the impacts of recreational drugs like alcohol and cigarettes on behaviour, health and life process (including gestation) Label the respiratory system and describe the function of each part Describe what is meant by gas exchange and how the respiratory system is adapted for this to happen efficiently Describe the mechanism of breathing, including detail of the ribs, intercostal muscles, diaphragm and pressure changes Explain the difference between breathing and respiration Define the terms aerobic and anaerobic respiration and give the word equation for these processes Compare and contrast aerobic and anaerobic respiration Describe the mechanism of breathing, including detail of the ribs, intercostal muscles, diaphragm and pressure changes Describe how to make simple measurements of lung volume Describe the work of Franklin, Wilkin, Watson and Crick in the discovery of DNA Describe the structure of DNA, including base pairing Describe inheritance and draw Punnett squares for simple inheritance scenarios		

There is also a synoptic element meaning any Biology topics from Year 7 and 8 can be included.

- Knowledge organisers and curriculum details can be found at <u>Stockport Academy > Information > Curriculum</u>
 <u>Science (stockport-academy.org)</u>
- Students can access revision materials at Seneca Learning. <u>Free Homework & Revision for A Level, GCSE, KS3</u>
 <u>& KS2 (senecalearning.com)</u>

Chemistry

There is 1 Chemistry paper, which will be 40 minutes long

Topics include: Reactivity and Energetics and rates

Topics	include. Reactivity and Energetics and rates
Reactiv	rity:
	Use the periodic table to work out numbers of protons, neutrons, and electrons for any given element Explain why most atoms react, but group 0 do not Describe what an ion is and draw a diagram to show how atoms become ions Use charges to write formula for ionic compounds Calculate relative formula mass for given compounds Write equations for the reactions of metals with acids Describe the test for hydrogen gas and the positive result Write word equations for the reactions of metal oxides and metal carbonates with acids Describe the test for carbon dioxide and the positive result Name the salt produced from a range of neutralisation reactions Know the formula for common acids – hydrochloric, sulphuric, and nitric Write word or symbol equations for displacement and neutralisation reactions Use the reactivity series to predict if a chemical reaction will take place Explain how metals can be extracted from their ores using carbon Identify oxidation and reduction in given equations Explain how differences in reactivity can be used to produce a voltage and how this can be varied Define an alloy and explain why they are often more useful than pure metals Link the properties of metals to their uses
Energe	tics and rates:
	Describe some ways of measuring the rate of a reaction Identify independent, dependent and control variables from a given hypothesis Represent rate of reaction data on a graph Describe and explain the effect of concentration and surface area on the rate of a reaction Process and plot secondary data and draw lines of best fit, which may be curves Write conclusions for data collected or provided, using the data to back up any statements Explain what a catalyst is and how it works Explain what endothermic and exothermic reactions are and recognise them given information regarding temperature changes in a reaction Suggest how to improve equipment when investigating temperature changes and explain how these improve the data Define the term combustion Write word and symbol equations for combustion reactions Compare complete and incomplete combustion Explain what is meant by the term thermal decomposition Write word and/or symbol equations to represent the thermal decompositions of metal carbonates Calculate masses in a reaction using the law of conservation of mass

There is also a synoptic element meaning that Chemistry topics from Year 7 and 8 may also be included.

☐ Describe the lab tests for identifying carbon dioxide, water, and oxygen

- Knowledge organisers and curriculum details can be found at <u>Stockport Academy > Information > Curriculum</u>
 <u>Science (stockport-academy.org)</u>
- Students can access revision materials at Sparx Science by logging onto your Sparx Science account

English

Paper One is 45 minutes and assesses students' reading ability.

Students will be asked to respond to one question on one of the Sherlock Holmes stories they read last term: A Speckled Band or A Scandal in Bohemia.

The question will focus on either a character or theme from the text as a whole. For example:

How is the character of Irene Adler presented in this story?

Or

How does the writer present ideas about deception throughout the text?

The criteria below outlines the skills students are assessed on:

- The student can present ideas about the text and give reasons for the ideas which form a developed and coherent response.
- The student can provide a detailed explanation of the impact of the writer's methods.
- The student can select a range of relevant evidence/references from different parts of the text to support ideas.
- The student can use a range of appropriate subject terminology/vocabulary specific to the text type and specifically refers to the writer's intent.

Paper Two is 45 minutes and assesses students' writing ability.

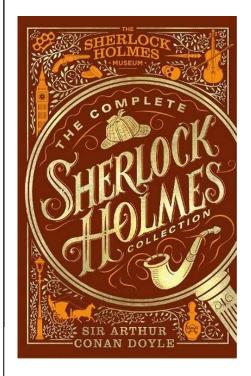
Students will be asked to complete a transactional writing task. This could include writing a letter, article, speech, or review. For example:

Write a formal letter of complaint to a company.

Write an article persuading young people to take up a new hobby.

The criteria below outlines the skills students are assessed on:

- A developed response with structure and vocabulary chosen for effect.
- Accurate use of a range of punctuation beyond full stops, commas, capital letters, and apostrophes.
- Accurate spelling of all words including some ambitious vocabulary.
- Accurate use of paragraphs which are shaped for effect.



Revision Materials

- Knowledge Organiser
- Revision booklet to be provided by teacher
- BBC Bitesize



French

There will be two papers, each paper will be 45 minutes long.

- 1. Receptive (Listening and Reading skills)
- 2. Productive (Writing skills)

Both papers will cover the following units of study: -

>	Relationships with Family and Friends	
	Character descriptions and relationships	
	Free time activities in the past and future	
	A good friend	
	My ideal partner	
	When you were younger	
	Festivals and Traditions	
	Food and drink	
	Festivals around the world	
	Celebrations in the past and future	
	Describing a photo	
	The French speaking world	
	Where I live and what you can do	
	Now and before	
	Comparing places to live in the world	
	Going shopping	
	The world around us	
	Environmental advice	
	Children's rights	
	Fair trade and volunteering	

/	Linguistic structures
	Infinitives
	Present tense verbs
	Reflexive verbs
	The Perfect tense
	The Future tense
	Negatives
	Opinions and justifications
	Agreement of adjectives
	Connectives
	Quantifiers
	Time expressions

/	y7 Content
	Greetings and Introductions
	Family
	School
	Where I live

	y8 Content
2	Holidays
~	
	Going out and Staying in
	Health and Fitness
	School, Future Plans and
	Jobs

- Knowledge Organisers Essential Knowledge
- United Learning https://curriculum.unitedlearning.org.uk/Curriculum?r=92929
- BBC KS3 Bitesize

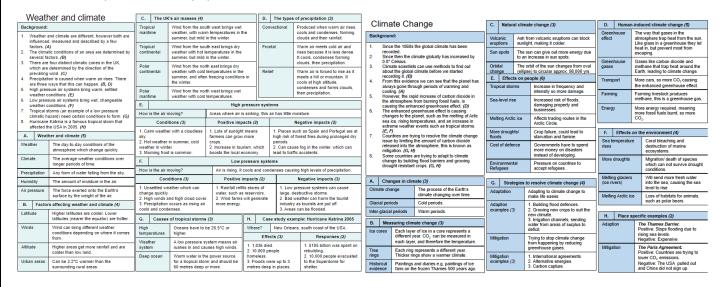
Geography

There will be one paper, which will be 60 minutes long.

It will contain questions relating to the following units:

- Climate change
- Life in a NEE

- Knowledge organisers for both units are available here: <u>Stockport Academy > Information > Curriculum > Humanities (stockport-academy.org))</u>
- Fluency sheets (each pupil has these stuck in their books at the start of each unit).



- Pupils must know about a named example of a weather event. We studied Cyclone Idai. For this they must learn at least specific facts about the tropical storm (for example the city most affected), 2 impacts (for example death toll) and 2 responses (for example search & rescue).
- Pupils must learn the different types of evidence that show climate change is taking place and the causes of climate change (both natural and human).
- SENECA key stage 3 geography, the weather and climate change units will be helpful. We have set these for all Y9 classes to work through. Their log in for SENECA is the same as last year or pupils can log in using Microsoft 365, which is their school email address and password.
- Exercise books are very useful as they contain everything that has been taught. Pupils can take their books home, but must remember to bring them in when they have geography lessons. They are no use if left in the classroom in a box all the time!

History

There will be one paper, which will be 1 hour long.

Unit 1: World War One

Who were the world's 'Great Powers'?
Long term causes of World War One - alliances
Long term causes of World War One – militarism
Short term causes of World War One - assassination

Unit 2: Suffrage

	Why did women get the vote - suffragettes
Why did women get the vote - suffragists	
	Why did women get the vote – supporting the war effort

Unit 3: Shifting world orders in the modern world

How did political ideologies shape Europe?
How did Hitler seize control of Germany
- Propaganda
- Great Depression
How did Europe fall under the control of dictators?

Unit 4: The Holocaust

How did the treatment of Jews escalate in Nazi Germany?	
- Boycott, 1933	
- Nuremberg Laws, 1935	
- Kristallnacht, 1938	
- Ghettos, 1939	
- Concentration camps and death camps	
Why could you argue that leading Nazi's were responsible for the Holocaust?	
Why could you argue Hitler was responsible for the Holocaust?	
Why could you argue that no-one was responsible for the Holocaust, and it was born out of a chaotic regime?	

Information Technology and Enterprise

There will be one paper, which is 30 minutes long

Programming

- Use of variables
- Use of functions
- Use of loops
- Use of if statements
- Begin to use user defined functions
- Create programming code to solve problems
- Testing / Errors

Enterprise

- Entrepreneurs
- Market research
- Research methods
- Business promotion methods

Computer Science

- Hardware inside the computer –e.g. RAM, CPU, Secondary Storage
- Binary Numbers, Text, Images and Sound
- Basic algorithms Inputs, Processes, Outputs
- Flowcharts

- KS3 Computer Science BBC Bitesize KS3 Computer Science BBC Bitesize
- Knowledge organisers on school's website
- Enterprise: the students exercise book or episodes of Dragon's Den.
- Students can access revision materials at Seneca Learning. <u>Free Homework & Revision for A Level, GCSE, KS3</u>
 <u>& KS2 (senecalearning.com)</u> look for ks3 computing.

Mathematics

Paper 1 – 60 minutes – non-calculator

Paper 2 – 60 minutes – calculator

Below are the topics and topic code to revise for the assessment. By going onto the independent study section on Sparx (shown below), you can use the Sparx codes to get videos and questions to complete to help you revise the topics. If you have any questions, please ask your teacher.

Topic		Sparx Codes
9.01	Decimal Manipulation	U417, U478, M462, U735, U127, U293, U453, U868, U976
9.02	Estimation and Limits of accuracy	U480, U298, U731, U965, U225, U657, U587, U108, U301
9.03	Related Calculations	U735
9.04	HCF & LCM of large numbers	U211, U751, U529, U236, U739, U250
9.05	Fraction Calculations	U736, U692, U793, U475, U224, U544, U538, U881, U916, U163
9.06	Algebraic Manipulation	M795, U613, M830
9.07	Index Laws	U105, U622, U103, U437, U685, U457, U824
9.08	Standard Form	U330, U534, U264, U290, U161
9.09	Expanding & Factorising 2	U179, U365, U768, U178, U963
9.10	Forming expressions & substitution	M175, M428, U201, U585, U144
9.11	Direct and Inverse Proportion	U721, U610, U357, U640, U407, U364, U138, U238, U369
9.12	Probability 1	U408, U510, U683, U166, U104, U476, U748, U296, U280, U580
9.13	Solving equations 2	U755, U325, U585, U144, U870, U599, U505
9.14	Inequalities 1	U759, U509, U738, U145
9.15	Sequences	U213, U530, M381, M241, U498, U978, U680, U958
9.16	Pythagoras	U851, U385, U541
9.17	Interior and Exterior Angles	U447, U390, U730, U628, U732, U329, M985, U427
9.18	Vectors 1	U196, U903, U564, U632, U660
9.19	Transformations 1	U196, U799, U696, U519



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Physics

There is 1 Physics paper, which will be 40 minutes long Topics include: Forces in Action, Matter and Sound Forces in action: ☐ Identify levers, pivots and forces applied ☐ Define a 'moment' and calculate it using data supplied ☐ Explain, in terms of moments, what happens when an object is balanced ☐ Calculate forces needed or distance from the pivot required to achieve balance ☐ Define the term 'simple machine' and give some examples ☐ Calculate work done and give the unit Calculate averages, ignoring anomalies, and round them to the same decimal places as original data ☐ Recognise and describe a proportional relationship ☐ Describe what is meant by 'elastic deformation' and elastic objects ☐ Explain what is meant by the 'elastic limit' of an object and recognise this on a graph ☐ Use Hooke's Law to calculate force, extension, or spring constants Describe the difference between reproducible data and reproducible conclusions and relate this to the Hooke's Law practical Matter: Describe the arrangement, movement, and forces of attraction in solids, liquids, and gases ☐ Link the properties of solids, liquids, and gases to particle theory – e.g., why a gas and liquid can flow Explain what is meant by density and use densities of substances to predict what will float or sink ☐ Explain Brownian motion and diffusion ☐ Use Density = mass ÷ volume to calculate any of the values given the other two Describe pressure in liquids and how it changes with depth ☐ Use the pressure = Force / Area calculation to calculate pressure, force, or area ☐ Explain the basic principles of hydraulic systems ☐ Name the forces involved in floating and sinking Describe and explain what happens to the weight of all objects in water, including those that float and sink ☐ Explain why objects float or sink in terms of forces ☐ Describe atmospheric pressure ☐ Explain effects of the atmosphere and changes to pressure ■ Explain why atmospheric pressure varies with altitude Sound: ☐ Label the main features of a wave diagram ☐ Compare light and sound waves ☐ Describe what happens when waves meet Describe how pitch and loudness of sounds are determined ☐ Interpret oscilloscope traces ☐ Describe what happens when sound meets a surface ☐ Calculate the speed of sound in air, identifying anomalies Calculate uncertainty in the results and suggest sources of error Describe how and explain why the speed of sound varies in different media in terms of particles Describe how sounds are heard ☐ Explain what is meant by 'hearing range' and how this differs with age and in different animals

☐ Measure the loudness of common sounds using appropriate units

 □ Describe what is meant by ultrasound □ Describe uses of ultrasound □ Explain how the sound waves are used in given contexts □ Describe how a microphone works □ Describe how a loudspeaker works □ Explain why the frequency of the sound produced in the speaker is the same as the original sound wave 	
There is also a synoptic element meaning that Physics topics from Year 7 and 8 may also be included.	
Useful resources:	
 Knowledge organisers and curriculum details can be found at <u>Stockport Academy > Information > Curriculum > Science (stockport-academy.org)</u> Students can access revision materials at Sparx Science by logging onto your Sparx Science account 	
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Religious Studies

There will be one paper which will be 1 hour long

Section A: Issues of Equality [25] ☐ Religion and equality ☐ Fight for racial equality ☐ Gender and equality ☐ LGBTQ+ ■ Disability Section B: Issues of Life and Death [25]

Natural law
Situation Ethics
Abortion
Euthanasia

You should use the below to help you revise:

- Knowledge organisers
- Exercise books

		Knowledge Orga	nise	er Equa	ality
1	Equality	The state of being equal, especially in status, rights, or opportunities.	11	Racism	Prejudice, discrimination, or antagonism by an individual, community, or institution against a person or people on the basis of their membership
2	Privilege	A special right, advantage, or immunity granted or available only to a particular person or group.			of a particular racial or ethnic group.
3	Prejudice	Pre-judging a person or group based on aspects of their identity in a negative way.	12	Slavery	A condition of having to work very hard without proper pay or appreciation.
4	Discrimination	The unjust treatment of different categories of people, especially on the grounds of race, age, sex, or disability.	13	Liberation	The action of setting someone free from imprisonment, slavery, or oppression
5	Justice	Fairness; the principle that people receive that which they deserve.	14	Liberation Theology	A movement in Catholic Christianity which attempts to address the problems of poverty and social injustice as well as spiritual matters.
6	Diversity	The practice or quality of including or involving people from a range of different social and ethnic backgrounds and of different genders, sexual orientations, etc.	15	Social Change	Changing of the social order of a society.
7	Persecution	Hostility and ill-treatment, especially because of race or political or religious beliefs.	16	Gender	A word that is used to talk about how people express masculine (traits most people think of as male) or feminine (traits most people think of as female) traits.
8	Rights	A moral or legal entitlement to have or do something.	17	Gender Equality	The state in which access to rights or opportunities is unaffected by gender.
		_		Feminism	The advocacy of women's rights on the ground of the equality of the sexes.
9	Universal Declaration	An international document that states the rights and freedoms of all human beings.			
	of Human Rights	-	19	LGBTQ	An acronym for lesbian, gay, bisexual, transgender and queer or questioning. Terms are used to describe a person's sexual orientation or gender
10	Status	Position or rank in relation to others.			identity.
			20	Disability	A physical or mental condition that limits a person's movements, senses, or activities.

Knowledge Organiser | Life & Death

What's the right thing to do?

- Philippa Foot was the thinker behind the Trolley problem. Whether to pull lever and kill 1 person or leave the train to hit 5 people.
- This is a moral dilemma which questions people's ethical choices.

Natural Moral Law

Thomas Aquinas was the Christian thinker behind the Natural Moral Law. There were 5 primary precepts (rules) that humans must follow (use 'POWER' to remember them):

Preserve Life
Live in an Ordered society
Worship God
Educate Children
Reproduce

To assist with these Aquinas developed Secondary precepts which help people to live by the Primary ones. <u>F.g. E</u>ducate children by sending them to <u>school and</u> <u>Preserve Life</u> by not having an abortion.

Criticisms of Natural Moral Law

- Some Christians interpret these rules in an absolutist way – they want to follow them completely, so that may create a moral dilemma for them if they, for example, need an abortion due to health reasons.
- Taking into account the whole person
- They are based on a Christian idea of God (not everyone is Christian).

Situation Ethics

- Joseph Fletcher was the thinker behind Situation ethics. Fletcher said that we should do "the most loving thing" in any situation and focused on the use of the word Agape.
- For example, in the issue of Abortion if the woman's life is at risk from giving birth maybe the most loving thing to do is to have an abortion.
- This focuses on Quality of Life.

Criticisms of Situation Ethics

- Slippery Slope: For some things we need important guidelines for important choices, as just doing things on a case-by-case basis could be counter intuitive.
- Is "love" a good guiding principle? What love means to one person might be different to another-instead we should have clear, concise rules
- Some people use "love" to do "unloving" things - Scientists using animals for testing medicine.

Euthanasia

Types of Euthanasia; Voluntary Euthanasia, Active Euthanasia, Passive Euthanasia and Involuntary

Euthanasia is illegal in the UK under the suicide act of 1961.

Capital Punishment

This is the legally authorised killing of someone as punishment for a crime. Known as the Death Penalty.

Examples: Electric Chair and Lethal injection Abortion: A procedure to end a pregnancy.

Pro-life people would say that abortion is wrong because many believe that life starts at conception (when an egg and sperm meet). Thomas Aquinas' First primary precept to 'Preserve Life' also goes against abortion.

Christians and Muslims believe in the **sanctity of life** – this means that life is special (sacred) and a gift from God

A **Christian** might say "do not kill". This is one of the Ten Commandments from the **Bible**.

They might also say ""God created mankind in our own image" which suggests that humans look like God – so ended a human life is like ending God's life and destroying God's creation.

A **Muslim** might say "<mark>do not take a life which Allah has made sacred</mark>". This is from the **Qur'an**.

They might also say ""If anyone kills a person, it would be as if he killed the whole of mankind" which shows that killing is not permitted in Islam, and causing one death is as terrible as killing everyone.

Pro-choice people would say that there are circumstances that need to be considered, such as the woman's health – is her life at risk? Joseph Fletcher's Idea of doing the "most loving thing" is important here.

Everyone has the "right to life" in the UDHR-this includes the pregnant woman, who's life may be at risk; Some people are not ready to have a child; Some people may be pregnant due to assault; some people may fear than another child will cause poverty for their family due to the cost of living crisis.

Spanish

There will be two papers, each paper will be 45 minutes long.

- 1. Receptive (Listening and Reading skills)
- 2. Productive (Writing skills)

Both papers will cover the following units of study: -

~	Relationships with Family and Friends
	Character descriptions and relationships
	Free time activities in the past and future
	A good friend
	My ideal partner
	When you were younger
	Festivals and Traditions
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✓	Linguistic structures
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	Present tense verbs
	Reflexive verbs
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	Opinions and justifications
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	Family
	School
	Where I live

	y8 Content		
~	Holidays		
	Going out and Staying in		
	Health and Fitness		
	School, Future Plans and		
	Jobs		

- Knowledge Organisers Essential Knowledge
- United Learning https://curriculum.unitedlearning.org.uk/Curriculum?r=92927
- BBC KS3 Bitesize

Revision Timetable

Day	Morning	Afternoon	Review points
Saturday			
Sunday			
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			

Day	Morning	Afternoon	Review points
Saturday			
Sunday			
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
	•	•	

Day	Morning	Afternoon	Review points
Saturday			
Sunday			
Manday			
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			